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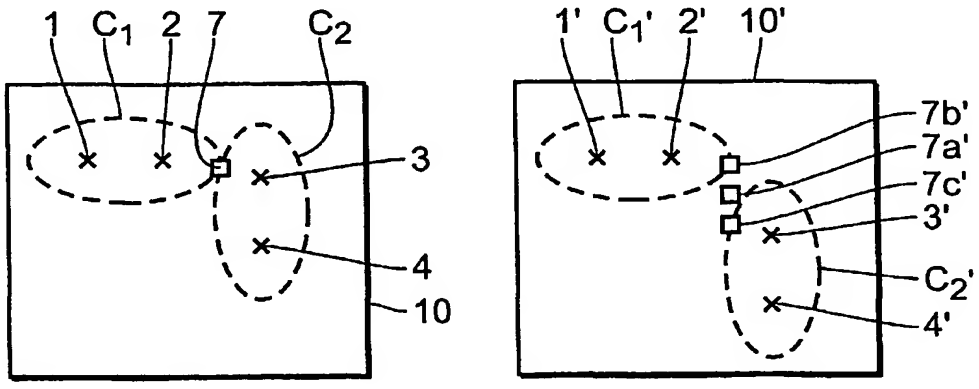
(54) Title: METHOD AND DEVICE FOR IMAGE REGISTRATION



(57) Abstract: The present invention relates to a method of computing the transformation for transforming two images (10, 10'), in particular medial MR- or CT-images of a patient, one into the other. The motion pattern at tissue boundaries shows an abrupt change of local transformation parameters that can not be described by continuous transformation functions. To deal with this problem a clustering of corresponding control points (1-4) is proposed which all have similar or substantial by the same transformation parameters (t1-t4). Criteria for clustering are derived from the local transformation parameters. The transformation parameters for further control points (5, 6, 7), which belong to more than one cluster (C1, C2) are determined in two steps taking into account that the control point (5, 6, 7) could belong to only one of the clusters rather than by performing a conventional interpolation of the transformation parameters of neighbouring control points.

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